

03-0915

REMARKS

Claims 1-9 and 19-20 are in the case and stand rejected under 35 USC § 102 over USPN 6,477,447 to Lin. The rejections are respectfully traversed. Reconsideration and allowance of the claims are respectfully requested.

COMMENTS ON EXAMINER'S RESPONSE TO ARGUMENTS

The examiner states that "Lin clearly states that the pressure components are *not* limited to what applicant calls the wafer polishing subsystem, but any pressure related component used in a chemical mechanical polishing system." Applicants are unable to find this statement anywhere in Lin, and it is noted that the examiner does not provide a citation for this statement. Applicants have provided citations in Lin for statements that specifically refute the examiner's allegation (in applicants' first response, and provided again below). The examiner is obligated to provide a citation to where Lin makes the statement recited by the examiner, or cite other explicit language in Lin that supports the allegation made by the examiner. The examiner must further reasonably construe the language to make the allegation that is asserted. In the absence of such, the allegation made by the examiner is improper.

The examiner also states that "a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art." While this may well be true for an apparatus claim, the present claims are directed towards a method, where performing an action with a given item is a valid limitation and patentable distinction between the method as claimed and the prior art. It is further noted that the present method is not a "process of making," as implied by the examiner in her reliance on *In re Casey*, such as a product by process. Thus, there is no required "intended use" of any article made by the process.

The examiner further states that "Berman does prove that a conditioner is inherently a pressure related component in a chemical mechanical polishing system." Again, the examiner has provided no support for this allegation. The examiner is obligated to recite that language in Berman that supports this allegation. In the absence of such, the allegation made by the examiner is improper. Applicants note that many

03-0915

polishing systems are not connected to a conditioning system. The fact that a polishing system may be built onto a common frame with a conditioning system does not make the conditioning system an inherent part of a polishing system.

Further, the allegation once again confuses the more important issue that different references may use the same words to refer to different things. The examiner has adapted the language "pressure related components" to suit her purpose, while ignoring how the references may (or may not) use the language. Lin has not used the language "pressure related components" in the manner specified by the examiner. Neither has Berman. Yet the examiner asserts that the phrase reads on elements that are not described in Lin, and which are depicted as separate elements in Berman.

For these reasons, applicants maintain their assertion that the examiner has impermissibly broadened the language of Lin. The examiner is obligated to cite specifically from the references and make reasonable arguments to refute this assertion.

CLAIM REJECTIONS UNDER §102

Claims 1-9 and 19-20 are rejected under 35 U.S.C. 102 as being unpatentable over Lin. As a prelude to the explanation below, applicants note that the rejections are based on an impermissible broadening of the phrase "pressure related components" as used by Lin. This impermissible broadening occurs because the definitions of the phrase as provided by Lin have been overlooked in the office action. Further, the office action impermissibly misconstrues the Berman reference to indicate something which it does not. When this phrase is restricted to the breadth that was intended by Lin, then the claims of the present application are allowable.

Independent claim 1 claims, *inter alia*, a method for inspecting a uniformity of pressure applied between a *conditioner* and a polishing pad on a chemical mechanical polisher, by placing a sheet of pressure sensitive material between the *conditioner* and the polishing pad, lowering the *conditioner* onto the sheet of pressure sensitive material, applying a desired degree of pressure between the *conditioner* and the polishing pad, lifting the *conditioner* from the sheet of pressure sensitive material, and inspecting the sheet of pressure sensitive material to determine the uniformity of the pressure applied between the *conditioner* and the polishing pad.

03-0915

Lin does not describe such a method. Specifically, Lin only describes taking pressure readings from within a chain of "pressure related components" that all have to do with the *wafer* polishing subsystem of a chemical mechanical polisher. Lin does not contemplate or in any way describe components within the *conditioner* subsystem of a chemical mechanical polisher. As described by Lin, the present application, and Berman, the wafer polishing subsystem and conditioner subsystem are two separate subsystems of a chemical mechanical polisher.

For example, Lin depicts only *wafer* polishing components, and does not depict any conditioner components. Lin always describes his embodiments in relation to the wafer polishing components, as follows: "for pressure-sensing of a *wafer* surface" (column 2 line 41), "various pressure related components *during a wafer CMP process*" (column 2 lines 52-53), "on the surfaces of the *wafer* and the pressure related components" (column 2 lines 66-67), "detecting pressure distribution on a *wafer* surface" (column 3 lines 4-5), "subjecting the *wafer* and the pressure related components to various pressure conditions" (column 3 lines 13-14), "it is an object of the present invention to provide a method of pressure detection on the surfaces of the *wafer* and the pressure related components" (column 4 lines 15-17), emphasis added.

In each instance, Lin describes sensing pressure in regard to a *wafer*, and *not* a *conditioner*. The "pressure related components" as recited by Lin are those components that are used to apply pressure on the surface of the wafer. However, these are not the components that are used to apply pressure to the conditioner.

The examiner asserts that a conditioner fall under the definition of "pressure related components." However, this logic is faulty. Lin effectively defines "pressure related components" in at least two different places in the reference. Lin states that "the invention relates to a method of detecting pressure distribution on a *wafer* surface by employing pressure sensitive films located on various *pressure components* such as a wafer carrier, a polishing pad, and mechanical arm members" (column 3 lines 4-8), emphasis added. All of these components are within the pressure train of the wafer polishing subsystem of a chemical mechanical polisher. Further, Lin restricts his invention to "detecting pressure distribution on a *wafer* surface."

03-0915

There is no way that Lin could detect pressure distribution on a *wafer* surface by measuring the pressure on the *conditioner*, as presently claimed, and thus, Lin never describes any components of the conditioner subsystem. Lin stops in his description of pressure monitoring at the wafer polishing subsystem. The present invention as claimed is directed toward a different subsystem of the chemical mechanical polisher, which is the conditioner subsystem. As described above, Lin does not mention any of the components of the conditioner subsystem.

The examiner has cited USPN 6,722,948 to Berman, who is one of the applicants of the present application, as support for the erroneous assertion that a conditioner is a "pressure related component" as the phrase is used by Lin. However, there is no mention in Berman of a conditioner being a "pressure related component." Lin uses that phrase to describe a very specific subsystem within a chemical mechanical polisher, as described at length above. Just because two references use a common phrase, does not mean that each reference means the same thing by the phrase. However, in the present case, the phrase as used by Lin is not even found in Berman. Therefore, there is absolutely no support in Berman that a conditioner is a "pressure related component" as the term is used in Lin.

However, Berman does provide some limited degree of insight into the present situation. It is very evident by Fig. 1 of Berman that the wafer polishing subsystem and the conditioner subsystem of a chemical mechanical polisher are separate systems. Thus, it is evident that all of the references in Lin to the pressure related components, which are used in conjunction with the wafer polishing subsystem, are not a part of the conditioner subsystem.

Thus, claim 1 patentably defines over Lin. Reconsideration and allowance of claim 1 are respectfully requested. Dependent claims 2-9 depend from independent claim 1, and contain additional important aspects of the invention. Therefore, dependent claims 2-9 patentably define over Lin. Reconsideration and allowance of dependent claims 2-9 are respectfully requested. Claims 10-18 are cancelled, as they were directed toward the wafer polishing subsystem, and not toward the conditioner subsystem.

Similar to that as described above in regard to claim 1, claim 19 claims, *inter alia*, a method for inspecting a uniformity of pressure applied between a *conditioner* and a polishing pad on a chemical mechanical polisher. The deficiencies of Lin in regard to

03-0915

such a combination of elements as recited in claim 19 are described at length above. Thus, claim 19 patentably defines over Lin. Reconsideration and allowance of claim 19 are respectfully requested. Dependent claim 20 depends from independent claim 19, and contains additional important aspects of the invention. Therefore, dependent claim 20 patentably defines over Lin. Reconsideration and allowance of dependent claim 20 are respectfully requested.


CONCLUSION

Applicants assert that the claims of the present application patentably define over the prior art made of record and not relied upon for the same reasons as given above. Applicants respectfully submit that a full and complete response to the office action is provided herein, and that the application is now fully in condition for allowance. Action in accordance therewith is respectfully requested.

In the event this response is not timely filed, applicants hereby petition for the appropriate extension of time and request that the fee for the extension be charged to deposit account 12-2355. If other fees are required by this amendment, such as fees for additional claims, such fees may be charged to deposit account 12-2252. Should the examiner require further clarification of the invention, it is requested that s/he contact the undersigned before issuing the next office action.

Sincerely,

LUEDEKA, NEELY & GRAHAM, P.C.

By: 

Rick Barnes, 39,596

2005.03.17